

# Scenarios and Sensitivities

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TO BE MODELED AS PART OF THE DEPARTMENT OF PUBLIC SERVICE  
TECHNICAL ANALYSIS OF A 100% RENEWABLE ENERGY STANDARD  
OR CLEAN ENERGY STANDARD

# Important notes on Scenarios

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Four Scenarios were structured within the contract with Sustainable Energy Advantage following stakeholder input on Scope of Work

Stakeholder Advisory Group provided input on what was important to model for all scenarios (e.g. eligibility dates, technologies), and chose two additional scenarios

- Stakeholder Advisory Group [Structure](#)
- Stakeholder Advisory Group [Members](#)

## Notes on Scenarios and Sensitivities

- Tier 1 is *net* of other Tiers – meaning all scenarios add up to 100% renewable or “clean”
- In “clean” energy scenarios, renewable energy Tier I continues to net to 75%.
- Intent is that Tiers will meet 100% by 2030, then Tier II or Regional Tier will continue to grow as a proportion of that Tier, until 2035.
- Battery Storage currently intended to be assessed as a modeling output, on a scenario-specific basis. Discussions ongoing to determine if/how to incorporate impacts from storage

# Proposed Scenarios & Sensitivities: PSD Scenarios, influenced by SAG and Polling Preferences

Scenarios → Design Element ↓		BAU	S1: 100% RES	S2: 100% RES, incl. Regional Tier	S3: 100% CES	S4: 100% CES, incl. Regional Tier
Tier I, Net	Target	65%	70%	40%	70%	40%
	Target Date	2032	2035	2035	2035	2035
	Eligibility Changes	N/A	None	None	Add nuclear	Add nuclear
Tier II	Target	10%	30%	30%	30%	30%
	Target Date	2032	2035	2035	2035	2035
	Eligibility Changes	N/A	None	None	None	None
Regional Tier	Target	N/A	N/A	30%	N/A	30%
	Target Date	N/A	N/A	2035	N/A	2035
	Eligibility*	N/A	N/A	2010+	N/A	2010+

## Sensitivities:

- Tier II Targets\*: 10%, 20%, 30% by 2035
- Regional Tier Targets\*: 20%, 30%, 40% by 2035

\* Tier I: set as remainder after Tier II and Regional Tier are defined

# Proposed Scenarios & Sensitivities: SAG Scenarios – select 2 out of 4

Scenarios → Design Element ↓		Option 1	Option 2	Option 3	Option 4
Tier I, Net	Target	50%	40%	80%	40%
	Target Date	2035	2035	2035	2035
	Eligibility Changes*	Remove biomass	Remove biomass	Add nuclear; remove biomass	Add nuclear; remove biomass
Tier II	Target	20%	Combined with Regional Tier	20%	Combined with Regional Tier
	Target Date	2035		2035	
	Eligibility Changes	None		None	
Regional Tier	Target	30%	60%	N/A	60%
	Target Date	2035	2035	N/A	2035
	Eligibility*	2010+	2010+	N/A	2010+

\* **Treatment of large hydro:** Achieve SAG’s hydro-related objectives by...

- (1) Including lower impact hydro in regional Tier (use CT Class I definition as a proxy), and
- (2) Limiting the overall % of sales met by Tier I (rather than limiting hydro by project size or location)

# Selection of two additional scenarios

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Options 1 and 4 were selected by Stakeholder Advisory Group members for modeling

- Each member had two votes
- Option 4 had the most votes (8 out of 11 voters)
- Option 1 was second (6 out of 11 voters)
- Three voters expressed no preferences from the four additional options developed

Sensitivities Remain for all scenarios

- Varying Tier II Targets
- Varying Regional Targets where applicable
- Load Forecasting